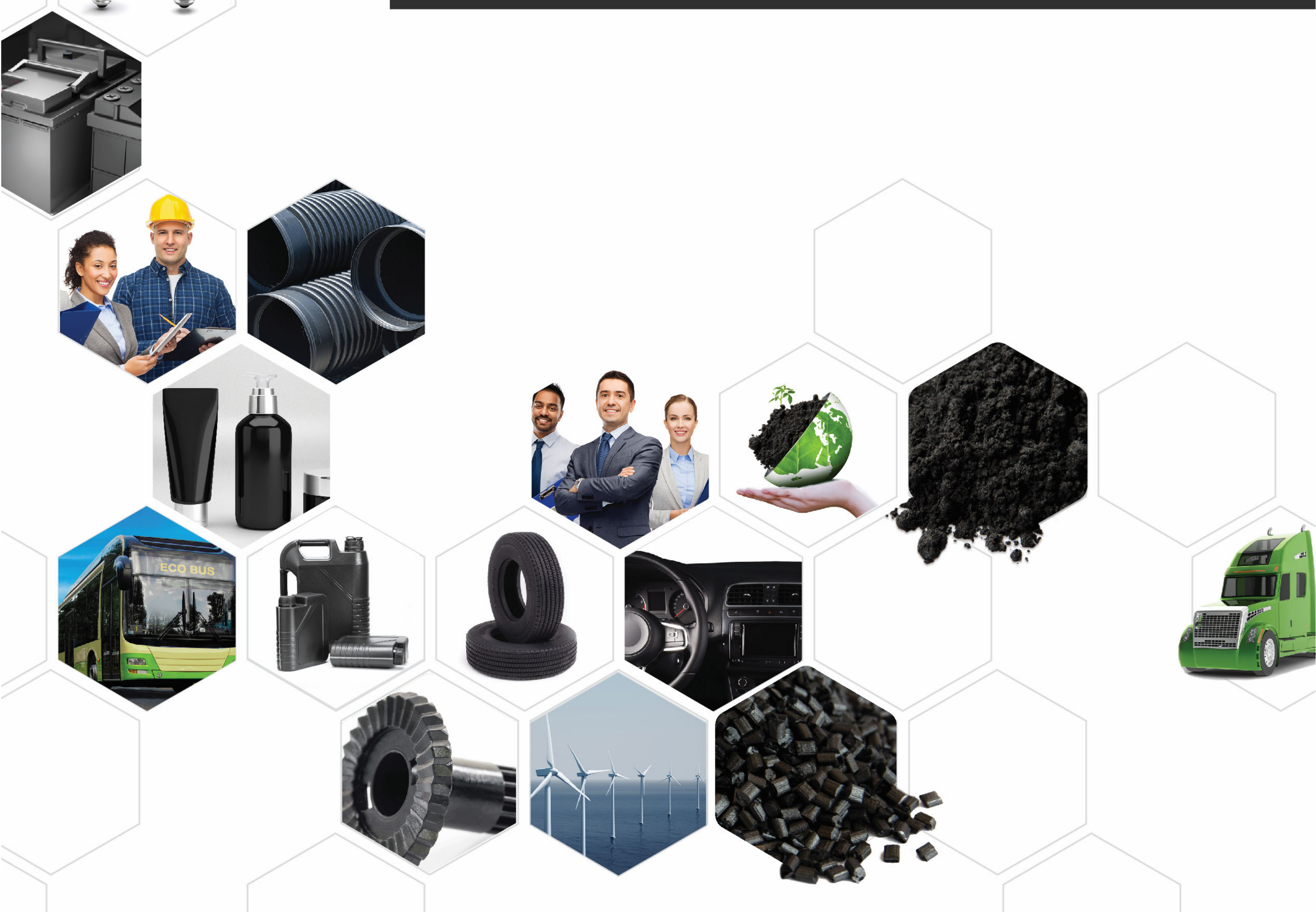
INTERIM MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three and six-month periods ended December 31, 2021 and 2020



[Unless specified otherwise, all amounts are expressed in Canadian dollars]

This interim Management's discussion and analysis ("MD&A") provides a review of NanoXplore Inc.'s operations, performance and financial position for the three and six-month periods ended December 31, 2021 and 2020 and should be read in conjunction with the unaudited consolidated financial statements for the three and six-month periods ended December 31, 2021 and 2020 and with the audited consolidated financial statements for the years ended June 30, 2021 and 2020. The purpose of this document is to provide information on our activities. The information contained herein is dated as of February 10, 2022, date on which the MD&A was approved by the Company's board of directors. You will find more information about us on NanoXplore's website at www.nanoxplore.ca and on SEDAR at www.sedar.com, including all press releases.

The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"). The Company has consistently applied the accounting policies used in the preparation of its IFRS financial statements, including the comparative figures. We occasionally refer to non-IFRS financial measures in the MD&A. See the Non-IFRS measures section for more information. The terms "we", "our", "us", ''NanoXplore'' or the "Company" mean NanoXplore Inc. and its subsidiaries, unless otherwise indicated.

"Q2-2022" and "Q2-2021" refer to the three-month periods ended December 31, 2021 and 2020 respectively, and "YTD 2022" and "YTD 2021" refer to the six-month periods ended December 31, 2021 and 2020 respectively.

1. FORWARD-LOOKING STATEMENTS

This MD&A contains certain forward-looking statements within the meaning of applicable Canadian securities laws with respect to the Company. Such forward-looking statements are dependent upon a certain number of factors and are subject to risks and uncertainties. Actual results may differ from those expected. The Company considers the assumptions on which these forward-looking statements are based to be reasonable, but it advises the reader that these assumptions with regard to future events, many of which are beyond the Company's control, could prove incorrect as they are subject to risks and uncertainties inherent in the Company's activities. Management does not assume any obligation to update or revise any forward-looking statements, whether as a result of new information of future events, except when required by the regulatory authorities.

This MD&A contains forward-looking statements. When used in this MD&A, the words ''may'', ''would'', ''could'', ''will'', ''intend'', ''plan'', ''anticipate'', ''believe'', ''seek'', ''propose'', ''estimate'', ''project'', ''expect'' and similar expressions are intended to identify forward-looking statements. In particular, this MD&A contains forward-looking statements with respect to, among other things, business objectives, expected growth, results of operations, performance, business projects and opportunities and financial results. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. Such statements reflect NanoXplore's then current views with respect to future events based on certain facts and assumptions and are subject to certain risks and uncertainties, including without limitation changes in the risk factors described under the section "*Risks and Uncertainties*" of this MD&A. The forward-looking statements are based on certain key expectations and assumptions made by NanoXplore, including expectations and assumptions concerning availability of capital resources, business performance, market conditions and customer demand. Although NanoXplore believes that the expectations and assumptions on which such forward-looking statements are based are reasonable, undue reliance should not be placed on the forward-looking statements since no assurance can be given that they will prove to be correct.

Many factors could cause NanoXplore's actual results, performance or achievements to vary from those described in this MD&A, including without limitation those listed above, those described under the section "*Risks and Uncertainties*" of this MD&A as well as the assumptions upon which they are based proving incorrect. These factors should not be construed as exhaustive. Should one or more of these risks or uncertainties materialize, or should assumptions underlying forward-looking statements prove incorrect, actual results may vary materially from those described in this MD&A as intended, planned, anticipated, believed, sought, proposed, estimated or expected, and such forward-looking statements should not be unduly relied upon. NanoXplore does not intend, and does not assume any obligation, to update these forward-looking statements except as required by law. The forward-looking statements contained in this MD&A are expressly qualified by these cautionary statements. Forward-looking statements contained in this MD&A about prospective results of operations, financial position or cash flows are based on assumptions about future events, including economic conditions and proposed courses of action, based on NanoXplore's management's assessment of the relevant information currently available. Readers are cautioned that outlook information contained in this MD&A should not be used for the purposes other than for which it is disclosed herein or therein, as the case may be.

2. BUSINESS OVERVIEW

COMPANY OVERVIEW

NanoXplore is a graphene company, a manufacturer and supplier of high-volume graphene powder for use in transportation and industrial markets. Also, the Company provides standard and custom graphene-enhanced plastic and composite products to various customers in transportation, packaging, electronics, and other industrial sectors. The Company was formed by amalgamation under the *Canada Business Corporations Act* by Certificate of Amalgamation dated September 21, 2017 and is headquartered at 4500 Thimens Blvd, Montreal, QC, Canada.

On July 15, 2021, NanoXplore Inc. graduated from the Toronto Stock Exchange ("TSX") Venture Exchange to the TSX. NanoXplore is still traded under "GRA" and is also listed on the OTCQX and traded under "NNXPF".

The Company has the following subsidiaries:

- NanoXplore Switzerland Holding SA ("NanoXplore Switzerland"), based in Switzerland, with an equity interest of 100% [2020 – 100%]. NanoXplore Switzerland holds 100% of CEBO Injections SA ("CEBO").
- NanoXplore Holdings USA, Inc. ("NanoXplore Holdings USA"), based in the United States, with an equity interest of 100% [2020 – none]. NanoXplore Holdings USA holds 100% of NanoXplore USA, Inc.
- Sigma Industries Inc. ("Sigma"), based in Canada, with an equity interest of 100% [2020 – 100%]. Sigma has two active wholly owned subsidiaries; Faroex Ltd., based in Manitoba, and Rene Composite Materials Ltd., based in Quebec. Rene Composite Materials Ltd. has one active wholly owned subsidiary; RMC Advanced Technologies Inc., based in the United States.
- Canuck Compounders Inc. ("Canuck"), based in Canada, with an equity interest of 100% [2020 – nil].

On April 1, 2021, VoltaXplore Inc. ("VoltaXplore") was incorporated. On April 14, 2021, NanoXplore and Martinrea Innovation Developments Inc., a wholly-owned subsidiary of Martinrea International Inc. ("Martinrea"), formed a joint venture through VoltaXplore, a battery-based initiative to service the electric transportation and grid storage market.

On December 15, 2021, the Company acquired all of the issued and outstanding shares of Canuck.

BUSINESS HIGHLIGHTS

COVID-19 Pandemic

On March 11, 2020, the World Health Organization declared the outbreak of the COVID-19 a global pandemic and recommended various containment and mitigation measures. Since then, extraordinary actions have been taken by public health and governmental authorities across the globe to contain the spread of COVID-19, including travel bans, social distancing, quarantines, stay-at-home orders and similar mandates for many businesses to reduce or cease normal operations.

The COVID-19 pandemic and its negative collateral effects on the supply of materials and the availability of labour continued to have an adverse effect on our business, results of operations, cash flows and financial position. However, the full impact cannot be determined at this time. The extent of the impact will depend on various factors, including the possibility of future shutdowns, impact on customers and suppliers, the rate at which economic conditions and operations return to pre-COVID levels, any continued or future governmental orders or lock-downs due to this wave of COVID-19, or any future wave, and the potential for a recession in key markets due to the effect of the pandemic.

The discovery of several effective vaccines and their deployment allows us to hope for an end to the crisis. Until the situation is stable, the Company will continue to respond in a measured, prudent and decisive manner with continued emphasis on health and safety, cash conservation and the maintenance of its liquidity position.

Acquisition of Canuck

On December 15, 2021, the Company acquired all of the issued and outstanding shares of Canuck for a total preliminary consideration of $9,048,509. This amount represents $9,300,000 plus cash on hand, less debt and a working capital adjustment, subject to post-closing adjustments, and a discount on the balance of purchase price due in 24 months. This transaction was financed using the Company's available cash. This acquisition was concluded to expand the Company's downstream, value-added product offering through enhanced masterbatch and compounds.

Canuck was a privately held plastic recycling compounder for the past 30 years and provides sustainable and engineered recycled plastic compounds for use in transportation, building and construction, agriculture and packaging markets. Canuck's manufacturing facility is based in Cambridge, Ontario.

Consent order for GrapheneBlackTM

On August 16, 2021, the Company entered into a consent order with the U.S. Environmental Protection Agency ("EPA") under the Toxic Substances Control Act (TSCA) (the "Consent Order"), which Consent Order allows for the commercial use of its GrapheneBlack™ as an additive for thermoplastics, thermosets and rubbers, with no annual volume limitation.

Long-term debt and Advance debt payment

The total long-tern debt (excluding long-term debt directly associated with property held for sale) decreased from $11,652,440 as at June 30, 2021 to $9,055,116 as at December 31, 2021 for a variation of $2,597,324 which included advance payments of $1,948,398 to provide a fertile ecosystem for growth.

Investment in a Joint Venture - VoltaXplore

In January 2022, the Company and Martinrea have provided $1,000,000 each in cash to VoltaXplore to continue to support the construction of a demonstration facility.

3. OVERALL RESULTS

Results of operations may include certain unusual and other items which have been separately disclosed, where appropriate, in order to provide a clear assessment of the underlying Company results. In addition to IFRS measures, management uses non-IFRS measures in the Company's disclosures that it believes provide the most appropriate basis on which to evaluate the Company's results.

The following tables set out certain highlights of the Company's performance for the three and six-month ended December 31, 2021 and 2020. Refer to the Company's unaudited condensed interim consolidated financial statements for the three and six-month periods ended December 31, 2021 for a detailed account of the Company's performance for the periods presented in the tables below.

	Q2-2022	Q2-2021	Variation		YTD 2022	YTD 2021	Variation	
	$	$	$	%	$	$	$	%
Revenues	**18,801,487**	17,463,831	1,337,656	8%	**37,619,933**	33,040,498	4,579,435	14%
Operating loss	**(5,216,906)**	(3,147,036)	(2,069,870)	66%	**(10,034,843)**	(3,833,998)	(6,200,845)	162%
Loss	**(3,585,180)**	(3,403,581)	(181,599)	5%	**(8,315,811)**	(3,496,839)	(4,818,972)	138%
Loss per share **(Basic and diluted)**	**(0.02)**	(0.02)			**(0.05)**	(0.02)		
Non-IFRS Measures *								
Adjusted EBITDA	**(3,113,136)**	(2,365,221)	(747,915)	32%	**(6,956,066)**	(3,502,949)	(3,453,117)	99%

* NON-IFRS MEASURES

This MD&A was prepared using results and financial information determined under IFRS. However, the Company considers certain non-IFRS financial measures as useful additional information in measuring the financial performance and condition of the Company. These measures, which the Company believes are widely used by investors, securities analysts and other interested parties in evaluating the Company's performance, do not have a standardized meaning prescribed by IFRS and therefore may not be comparable to similarly titled measures presented by other publicly traded companies, nor should they be construed as an alternative to financial measures determined in accordance with IFRS. Non-IFRS measures include "Adjusted EBITDA".

The following table provides a reconciliation of IFRS "Loss" to Non-IFRS "Adjusted EBITDA" for the three and six-month periods ended December 31, 2021 and 2020.

	Q2-2022 $	Q2-2021 $	YTD 2022 $	YTD 2021 $
Loss	**(3,585,180)**	(3,403,581)	**(8,315,811)**	(3,496,839)
Current and deferred income tax recovery	**(378,445)**	(295,088)	**(421,847)**	(320,237)
Net interest expenses	**174,256**	551,633	**394,692**	1,108,528
Share of loss of a joint venture	**173,734**	—	**231,475**	—
Gain on disposal of property, plant and equipment	**(1,601,271)**	—	**(1,923,352)**	—
Gain on a bargain purchase	**—**	—	**—**	(1,125,450)
Canada Emergency Wage Subsidy ("CEWS")	**(41,608)**	(944,112)	**(840,249)**	(3,127,604)
Share-based compensation expenses	**179,937**	184,483	**351,878**	262,081
Non-operational items [(1)]	**312,426**	50,183	**312,426**	89,884
Depreciation and amortization	**1,653,015**	1,491,261	**3,254,722**	3,106,688
Adjusted EBITDA	**(3,113,136)**	(2,365,221)	**(6,956,066)**	(3,502,949)

The following table provides a reconciliation of IFRS "Loss" to Non-IFRS "Adjusted EBITDA" for the three-month period ended September 30, 2021.

	Q1-2022 $
Loss	**(4,730,631)**
Current and deferred income tax recovery	**(43,402)**
Net interest expenses	**220,436**
Share of loss of a joint venture	**57,741**
Gain on disposal of property, plant and equipment	**(322,081)**
CEWS	**(798,641)**
Share-based compensation expenses	**171,941**
Non-operational items [(1)]	**—**
Depreciation and amortization	**1,601,707**
Adjusted EBITDA	**(3,842,930)**

[(1)] Non-operational items consist of professional fees related to business acquisition (Canuck during the current periods and CSP during last year periods) and for the filing of the short form base shelf prospectus.

RESULTS OF OPERATIONS VARIANCE ANALYSIS – THREE-MONTH PERIODS

Revenues

	Q2-2022	Q2-2021	Variation		Q1-2022	Variation	
	$	$	$	%	$	$	%
Revenues from customers	**18,425,908**	16,218,363	2,207,545	14%	**17,830,017**	595,891	3%
Other income	**375,579**	1,245,468	(869,889)	(70%)	**988,429**	(612,850)	(62%)
Total revenues	**18,801,487**	17,463,831	1,337,656	8%	**18,818,446**	(16,959)	(0%)

Revenues from customers increased from $17,830,017 in the previous quarter (Q1-2022) to $18,425,908 in the current quarter (Q2-2022). Despite the increase in revenues from customers, they continued to be negatively impacted as some of our major customers had to slow down their production cadence due to supply issues (semiconductors among others) while other customers have still not regained their pre-pandemic levels (coach buses and industrial sectors).

Revenues from customers increased from $16,218,363 in the last year comparable quarter (Q2-2021) to $18,425,908 in the current quarter (Q2-2022). This increase is mainly explained as follows:

- The revenues from customers volume were negatively impacted as some of our major customers had to slow down their production cadence due to supply issues (semiconductors among others) while other customers have still not regained their pre-pandemic levels (coach buses and industrial sectors). This volume decrease has been offset by price increase and new sales program.
- The FX (USD/CAD) negatively impacted the revenues from customers during the current quarter
- Fluctuating tooling revenues were higher in this current quarter compared to last year quarter; and
- During the current quarter, the Company acquired Canuck on December 15, 2021. Sales of Canuck for this period were $728,681.

Other income decreased from $1,245,468 in the last year quarter (Q2-2021) to $375,579 in the current quarter (Q2-2022). The decrease is explained by the CEWS program set up by the Canadian Federal government to help businesses deal with the COVID-19 pandemic. The Company received $41,608 under this program during Q2-2022 compared to $944,112 in Q2-2021 as the program ended in October 2021.

Adjusted EBITDA

The adjusted EBITDA improved from ($3,842,930) in the previous quarter (Q1-2022) to ($3,113,136) in the current quarter (Q2-2022). The improvement is mainly coming from the product mix, better gross margin and higher sales price.

The adjusted EBITDA went from ($2,365,221) in the last year quarter (Q2-2021) to ($3,113,136) in the current quarter (Q2-2022). The variation is explained as follows:

- The gross margin is down by $533,842 compared to last year.
  - Mainly due to labour issues, increased labour cost and elevated maintenance on production equipment, and
- Higher administrative expenses (SG&A and R&D) of $367,026 mainly due to the addition of strategic new positions, an increase in salaries and to the addition of Canuck.

Loss

The loss increased from $3,403,581 in the last year quarter (Q2-2021) to $3,585,180 in the current quarter (Q2-2022). This variation of $181,599 is mainly explained as follows:

- The adjusted EBITDA decreased by $747,915 as explained above.
- A decrease of $902,504 in government assistance received from the Canadian federal government through its CEWS program;
- Additional professional fees for the acquisition of Canuck and the filing of the short from base shelf prospectus for $262,243
- These losses were offset by the gain on disposal of property, plant and equipment of $1,601,271 explained by the sale of the property held for sale located in Quebec.

RESULTS OF OPERATIONS VARIANCE ANALYSIS – SIX-MONTH PERIODS

Revenues

	YTD 2022	YTD 2021	Variation	
	$	$	$	%
Revenues from customers	**36,255,925**	29,426,261	6,829,664	23%
Other income	**1,364,008**	3,614,237	(2,250,229)	(62%)
Total revenues	**37,619,933**	33,040,498	4,579,435	14%

Revenues from customers increased from $29,426,261 in the last year period (YTD 2021) to $36,255,925 in the current period (YTD-2022). This increase is mainly explained as follows:

- During the current period, we have the full impact of revenues from the Continental Structural Plastics-Newton plant ("CSP Newton Plant") as the acquisition was completed on September 11, 2020;
- During the current period, we have the impact of revenues from Canuck as the acquisition was completed on December 15, 2021;
- Fluctuating tooling revenues were higher in the current period compared to the last year period;
- The revenues from customers volume were negatively impacted as some of our major customers had to slow down their production cadence due to supply issues (semiconductors among others) while other customers have still not regained their pre-pandemic levels (coach buses and industrial sectors). This volume decrease has been offset by price increase and new sales program; and
- The FX (USD/CAD) negatively impacted the revenues during the current period.

Other income decreased from $3,614,237 in the last year period (YTD-2021) to $1,364,008 in the current period (YTD-2022). The decrease is explained by the CEWS program set up by the Canadian Federal government to help businesses deal with the COVID-19 pandemic. The Company received $840,249 under this program during the current period compared to $3,127,604 in the last year period as the program ended in October 2021.

Adjusted EBITDA

The adjusted EBITDA decreased from ($3,502,949) in the last year period (YTD 2021) to ($6,956,066) in the current year period (YTD 2022). This variation of $3,453,117 is mainly explained as follows:

- The gross margin is down by $2,212,547 compared to last year period.
  - There has been significant increase in the cost of raw materials which we have been able to partially pass on to our customers;
  - Like many manufacturing companies, we are facing a labour shortage. We had to use personnel agencies, work overtime hours and rely more heavily on outsourcing. This had a negative impact on labour costs and consequently, on productivity;
  - More maintenance on production equipment have been done; and
- Higher administrative expenses (SG&A and R&D) of $1,210,791 mainly due to the addition of strategic new positions and the addition of the CSP Newton Plant's expenses.

Loss

The loss increased from $3,496,839 in the last period (YTD-2021) to $8,315,811 in the current period (YTD-2022). This variation of $4,818,972 is mainly explained as follows:

- The adjusted EBITDA decreased by $3,453,117 as explained above;
- A decrease of $2,287,355 in government assistance received from the Canadian federal government through its CEWS program;
- A gain on a bargain purchase of $1,125,450 has been recognized in the last period due to the acquisition of the CSP Newton Plant in September 2020; and
- These losses were offset by the gain on disposal of property, plant and equipment of $1,923,352, mainly due to the sale of the property held for sale located in Quebec.

FINANCIAL OUTLOOK

For the year ending June 30, 2022, we expect annual revenues of more than $85 million. We anticipate progressive growth in the third and fourth quarters due to the Canuck acquisition and improved outlook provided by our customers. We also expect to achieve positive adjusted EBITDA in the fourth quarter of 2022.

SUMMARY OF QUARTERLY RESULTS

The table below presents selected financial data for the eight most recently reported quarters. This unaudited quarterly information has been prepared in accordance with IFRS.

		Revenues $	Loss [1] $	Basic and diluted loss per share $	
Q2-2022	December 31, 2021	18,801,487	(3,585,180)	(0.02)	
Q1-2022	September 30, 2021	18,818,446	(4,730,631)	(0.03)	**Note 1**
Q4-2021	June 30, 2021	20,886,168	(4,437,041)	(0.02)	**Note 2**
Q3-2021	March 31, 2021	18,421,736	(3,873,781)	(0.03)	
Q2-2021	December 31, 2020	17,463,831	(3,403,581)	(0.02)	**Note 3**
Q1-2021	September 30, 2020	15,576,667	(93,258)	(0.00)	**Note 4**
Q4-2020	June 30, 2020	12,568,227	(682,833)	(0.01)	**Note 5**
Q3-2020	March 31, 2020	14,866,180	(2,993,379)	(0.02)	**Note 6**

Note 1 The loss was higher than usual given less CEWS received and lower gross margin due to increases in raw material and labour costs.
Note 2 Higher revenues are mainly explained by fluctuating tooling revenues.
Note 3 The increase in revenues is explained by the business acquisition of the CSP Newton Plant, completed on September 11, 2020. The pandemic is still negatively impacting our revenues. We also received government assistance of $944,112 from the Canadian federal government through its CEWS program. The loss was higher than usual given less CEWS received, a negative FX (USD/CAD) impact and higher selling, general and administrative expenses is explained by the addition of strategic new positions, the addition of the CSP Newton Plant and higher salary expenses.
Note 4 Resumed activity has been observed among our customers, which explains an increase in revenues compared to the previous quarter, but the pandemic still negatively impacted our revenues. We also received government assistance of $2,183,492 from the Canadian federal government through its CEWS program. Although the COVID-19 pandemic negatively impacted the quarterly results, the loss was less significant than expected given the CEWS received and the gain on a bargain purchase of $1,125,450 due to the acquisition of the CSP Newton Plant.
Note 5 The decrease in revenues is explained by the negative impact of the COVID-19 pandemic partially offset by government assistance of $1,978,638 from the Canadian federal government through its CEWS program. Although the COVID-19 pandemic negatively impacted the quarterly results, the loss was less significant than expected given the CEWS and the cost reduction plan put in place during the period.
Note 6 The decrease in revenues is mainly explained by a decline in the transportation market (particularly trucks).

[1] Since the initial net assets acquired from CSP Newton Plant were estimated and the valuation was completed during Q4-2021, the fair value of the property, plant and equipment has been increased by $1,125,450 and this adjustment has been reflected retrospectively to the acquisition date as a gain on a bargain purchase in conformity with IFRS 3, *Business Combinations*.

4. FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

CONSOLIDATED FINANCIAL POSITION

	As at December 31, 2021 $	As at June 30, 2021 $	Variation $	Main reasons for significant variation
Assets				
Cash and cash equivalents	**31,217,916**	50,524,583	(19,306,667)	Refer to section Cash Flows
Accounts receivable and Contract asset	**19,374,251**	12,733,190	6,641,061	Mainly due to Canuck acquisition and timing
Inventory	**14,895,827**	11,036,407	3,859,420	Mainly due to Canuck acquisition
Investment in a joint venture	**3,751,584**	3,983,059	(231,475)	
Right-of-use assets	**7,718,711**	4,885,169	2,833,542	New leaseback with Newton building and new leases with Canuck acquisition
Property, plant and equipment, and equipment deposits	**53,946,133**	55,225,547	(1,279,414)	Mainly due to the disposal of Newton building
Property held for sale	**—**	2,424,351	(2,424,351)	Buildings located in Tennessee and Quebec were sold
Intangible assets	**3,313,751**	3,354,446	(40,695)	
Goodwill	**6,178,629**	460,164	5,718,465	Due to Canuck acquisition
Other assets	**1,927,562**	675,008	1,252,554	Prepaid expenses increase due to timing of the insurance premium payment
Total assets	**142,324,364**	145,301,924	(2,977,560)	
Liabilities and Shareholders' Equity				
Liabilities				
Accounts payable, accrued liabilities and income taxes payable	**16,795,229**	15,229,027	1,566,202	Due to Canuck acquisition and balance of purchase price from Canuck acquisition, offset by payment of the balance of purchase price of CSP Newton Plant, payment of variable compensation and payment timing
Deferred grant	**54,278**	—	54,278	
Contract liability	**1,712,520**	1,740,789	(28,269)	
Operating loans	**1,828,917**	1,343,300	485,617	
Defined benefit liabilities	**816,695**	811,316	5,379	
Balance of purchase price of business acquisition	**941,835**		—	
Long-term debt and lease liability	**23,887,553**	21,227,187	2,660,366	Mainly due to the new leaseback with Newton building and to new leases with Canuck offset by advance debt payment
Long-term debt directly associated with property held for sale	**—**	1,035,431	(1,035,431)	Building located in Quebec was sold
Deferred taxes liabilities	**629,419**	927,952	(298,533)	
Total liabilities	**46,666,446**	42,315,002	4,351,444	
Shareholders' Equity				
Share capital	**140,982,428**	140,067,376	915,052	
Reserve	**3,952,018**	3,880,555	71,463	
Foreign currency translation reserve	**31,181**	88,173	(56,992)	
Deficit	**(49,307,709)**	(41,049,182)	(8,258,527)	
Total shareholders' equity	**95,657,918**	102,986,922	(7,329,004)	
Total liabilities and shareholders' equity	**142,324,364**	145,301,924	(2,977,560)	

CASH FLOWS

	YTD 2022 $	YTD 2021 $	Variation $	%
Cash used in operating activities prior to changes in non-cash working capital items	**(6,333,096)**	(1,206,613)	(5,126,483)	425%
Changes in non-cash working capital items	**(7,065,088)**	(1,254,839)	(5,810,249)	463%
Operating activities	**(13,398,184)**	(2,461,452)	(10,936,732)	444%
Financing activities	**(3,684,717)**	(966,928)	(2,717,789)	281%
Investing activities	**(2,262,116)**	(7,259,678)	4,997,562	(69%)
Net effect of currency exchange rate on cash and cash equivalents	**38,350**	5,473	32,877	601%
Net change in cash and cash equivalents	**(19,306,667)**	(10,682,585)	(8,624,082)	81%

Operating activities

Cash flows used in operating activities prior to changes in non-cash working capital items was $6,333,096 in the current period compared to $1,206,613 in the last year period. This variation of $5,126,483 is mainly explained by the year-over-year increase of $3,453,117 of the adjusted EBITDA, which is due to a lower gross margin and higher administrative expenses as explained in previous section "Overall Results". It is also due to a reduction of $2,287,355 in the amount received from the CEWS program.

Changes in non-cash working capital items were ($7,065,088) for the six-month period ended December 31, 2021. The decrease is explained as follows:

- An increase of the accounts receivable and contract asset of $2,645,306 mainly due to timing;
- A reduction of accounts payable and accrued liabilities of $1,811,344 mainly due to the payment of the variable compensation and to timing;
- An increase of inventory of $1,452,085 due to an increase in production to meet our client forecast for Q3-2022; and
- An increase of prepaid expenses of $1,061,993 mainly related to the payment of the annual insurance premium.

Financing activities

Cash flows used in financing activities were $3,684,717 in the current period compared to $966,928 in the last year period. During the current period, repayment of $5,661,072 was completed on long-term debt and lease liability, which included advance debt payment of $1,948,398. This was offset by lease incentive received of $1,253,921, by an increase of $87,797 on operating loans and by stock options exercised for proceeds of $634,637. During last year period, repayment of $1,849,314 was completed on long-term debt and lease liability, offset by an increase of $189,486 on operating loans and by stock options exercised for proceeds of $692,900. Repayment of long-term debt was also higher in the current period as compared to last year period because of the fact that our banks authorized a moratorium on payments due to the pandemic.

Investing activities

Cash flows used in investing activities were $2,262,116 in the current period compared to $7,259,678 in last year period. During the current period, the Company paid $6,468,840 for the acquisition of Canuck, net of cash acquired, $2,051,304 for the repayment of balance of purchase price of the assets of CSP Newton Plant, and $1,944,522 for capital expenditures which are mostly related to expenditures of composites equipment. These were offset by the sale of three buildings for an amount of $8,325,052. During last year period, $2,303,450 was paid for acquiring the assets of CSP Newton Plant, and $4,956,228 was paid for capital expenditures which were mostly related to expenditures of the extruding line of the graphene plant and composites equipment.

USE OF PROCEEDS

Use of Proceeds Reconciliation

On February 12, 2021, the Company raised gross proceeds of $46,000,000 by issuing a total of 11,500,000 Common Shares pursuant to a short form prospectus offering (the "February 2021 Offering"). The net proceeds of the February 2021 Offering were $43,382,567, after deduction of underwriters' fees and other expenses.

The net proceeds of the February 2021 Offering are expected to be used by the Company within 24 months following the closing of the February 2021 Offering, as follows.

	Use of proceeds as described in the Short Form Prospectus dated February 5, 2021	Revised estimate of the use of proceeds as of the date hereof
Battery initiatives	4,000,000	5,000,000
Sales and marketing of graphene	20,000,000	20,000,000
Debt reduction	15,000,000	15,000,000
General corporate purposes	4,320,000	3,382,567
Total	**43,320,000**	**43,382,567**

The increase in planned expenditure for battery initiatives is mainly explained by higher-than-expected costs of equipment.

With respect to the reduction of the Company's debt, the Company expects to continue to gradually reduce its debt obligations, to provide a fertile ecosystem for growth. The Company is aware of the potential early payment fees resulting from repayment of debt before maturity and will take a balanced approach to minimize such fees.

With respect to the potential negative economic impacts of the Covid-19 pandemic on our business, the Company will continue to respond in a measured, prudent and decisive manner with continued emphasis on health and safety, cash conservation and the maintenance of its liquidity position.

The Company had negative cash flows from operating activities for the year ended June 30, 2021 and the six-month period ended December 31, 2021. The Company cannot guarantee if it will have positive or negative cash flow from operating activities in future periods. To the extent that the Company has negative cash flows in any future period, certain of the proceeds from the February 2021 Offering or future offerings may be used to fund such negative cash flows from operating activities.

LIQUIDITY AND CAPITAL RESOURCES

Throughout the COVID-19 pandemic, the Company has taken controlled and measured actions to preserve liquidity, including flexing and reducing its cost base, eliminating discretionary spending across its global footprint and delaying capital spending where and when appropriate. In addition, the Company enhanced its liquidity position with public financing for net proceeds of $43,382,567 during the financial year 2021. As at December 31, 2021, the Company had total liquidity of $39,745,806, including cash and cash equivalents and availability under the Company's operating loans.

Management believes that the Company has sufficient funds to meet its obligations, operating expenses and some development expenditures for the ensuing 12 months as they fall due. The Company's ability to continue its development activities is dependent on the impact of COVID-19 and the speed of introduction of graphene products into different industries. The graphene commercial activity is in the commercial introduction stage and, as a result, the Company has minimal sources of operating revenue from those operations and could be dependent on external financing to fund its continued development program, if the commercial introduction of the graphene is delayed. The Company's main sources of funding have been the issuance of equity securities for cash, debt, and funds from the government of Quebec with respect to R&D tax credits, from Sustainable Development Technology Canada ("SDTC") and from the CEWS program.

OFF-BALANCE SHEET ARRANGEMENTS

As of the date of this MD&A, the Company did not have any off-balance sheet arrangements, except for the commitment disclosed in the unaudited condensed interim consolidated financial statements for the three and six-month periods ended December 31, 2021 and 2020.

Management believes that the Company will be able to meet its obligations with cash on hand, cash flows from operations and drawdowns under existing credit facilities.

FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

For a detailed description of the financial instruments and risk management associated with the Company and its activities, please refer to the consolidated financial statements for the years ended June 30, 2021 and 2020. These identified financial instruments and risks are consistent through the period.

OUTSTANDING SHARES

As at February 9, 2022, the Company has:

- 158,333,126 common shares issued and outstanding;
- 3,455,399 options outstanding with expiry dates ranging between May 2, 2022 and September 21, 2026 with exercise prices between $0.45 and $6.44. If all the options were exercised, 3,455,399 shares would be issued for cash proceeds of $5,986,330.

5. RELATED PARTY TRANSACTIONS

For a detailed description of all related party transactions, please refer to the note 6 "Related party transactions" in the unaudited condensed interim consolidated financial statements for the three and six-month periods ended December 31, 2021 and 2020.

6. RISKS AND UNCERTAINTIES

The operations of the Company are speculative due to the high-risk nature of its business, which is the acquisition, financing, technology and manufacturing. These risk factors could materially affect the Company's future operating results and could cause actual events to differ materially from those described in forward–looking information relating to the Company.

For a detailed description of risks and uncertainties, refer to the annual consolidated financial statements for the years ended June 30, 2021 and 2020.

7. ACCOUNTING POLICIES

CRITICAL ACCOUNTING JUDGMENTS AND ESTIMATES

The preparation of consolidated financial statements requires management to make estimates and judgments about the future. Management periodically reviews these estimates, which are based on historical experience, changes in the business environment and other factors, including expectations of future events, that management considers reasonable under the circumstances. The estimates involve judgments we make based on the information available. However, accounting estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

The Company based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. However, existing circumstances and assumptions about future developments may change due to market events or to circumstances beyond the Company's control. Such changes are reflected in the assumptions when they occur. This discussion addresses only those estimates that we consider important based on the degree of uncertainty and the likelihood of a material impact if we had used different estimates. There are many other areas in which we use estimates about uncertain matters.

For a detailed description of the critical accounting judgments and estimates associated with the Company and its activities, please refer to the section "Significant management estimates and judgments in applying accounting policies" in the note 2 in the audited consolidated financial statements for the years ended June 30, 2021 and 2020. The Company was not required to make significant judgments, estimates and assumptions in areas other than those mentioned in the audited consolidated financial statements for the years ended June 30, 2021 and 2020.

FUTURE CHANGES IN ACCOUNTING POLICIES

Certain standards and amendments to existing standards have been published, and their adoption is mandatory for future accounting periods. Refer to the note 3 in the consolidated financial statements for the years ended June 30, 2021 and 2020 for the details of these standards and amendments.

8. CONTROLS AND PROCEDURES

In accordance with National Instrument 52-109 of the Canadian Securities Authorities, the Company has filed certificates signed by the Chief Executive Officer and the Chief Financial Officer that, among other things, attest to the design of the disclosure controls and procedures ("DC&P") and the design and effectiveness of internal controls over financial reporting.

No changes were made to the Company's internal controls over financial reporting during Q2-2022 that have materially affected, or are reasonably likely to materially affect, internal controls over financial reporting.

Limitation on Scope of Design

The scope of design of internal controls over financial reporting and DC&P excluded the controls, policies, and procedures of Canuck, which was acquired on December 15, 2021. Canuck's contributions to the Company's consolidated statements of loss and comprehensive loss for the six-month period ended December 31, 2021 was approximately 1.9% of total revenues. Additionally, as at December 31, 2021, Canuck's assets and liabilities represented approximately 7% and 13%, respectively, of the Company's consolidated assets and liabilities. The amounts recognized for the net assets acquired as at the date of this acquisition are described in Note 3a of the unaudited condensed interim consolidated financial statements for the three and six-month periods ended December 31, 2021 and 2020.